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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/549,812

09/19/2005

Toshihiro Yamada

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EXAMINER

CHRISS, JENNIFER A

ART UNIT

PAPER NUMBER

1771

MAIL DATE

DELIVERY MODE

09/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,812	<b>Applicant(s)</b> YAMADA, TOSHIHIRO	
	<b>Examiner</b> Jennifer A. Chriss	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/19/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 1 – 2, in the reply filed on 8/31/07 is acknowledged.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake et al. (US 2003/0094019) in view of Tanaka et al. (US 6,455,156).

Miyake et al. is directed to fibers suitable for use in warp knitted fabrics  
(Abstract).

As to claim 1, Miyake et al. teach a composite fiber formed by compositing in a side-by-side manner two types of poly(trimethylene terephthalates) having a difference in intrinsic viscosity from 0.05 – 0.3 dl/g. The intrinsic viscosity on the high viscosity side is selected from the range of 0.7 – 1.5 dl/g and the intrinsic viscosity on the low viscosity side is preferably selected from 0.5 – 1.3 dl/g (page 5, [0060]). The Examiner submits that claimed high viscosity range, low viscosity range and difference between viscosity range are met by Miyake et al. Miyake et al. note that the intrinsic viscosity is determined in an o-chlorophenol solution at a temperature of 35 degrees Celsius (page

9, [0108 – 0109]). Miyake et al. note that the shape of the poly(trimethylene terephthalate) fiber may be either filament or staple (page 6, [0069]); the Examiner equates the staple version of the Miyake et al. fiber to Applicant's "staple fiber". In addition, Miyake et al. teach that the cross-section of the fiber of the invention can be hollow (page 6, [0069]); it should be noted that, because the hollow portion is provided within the cross-section, it will be present along the longitudinal axis of the fiber as required by Applicant.

As to claim 2, Miyake et al. teach a side-by-side fiber that may have a hollow portion within its cross-section as noted above. It should be noted that the hollow part would be located within one of the two side-by-side components or in-between both (thus being in both components). Therefore, the hollow portion configuration is met by Miyake et al.

Miyake et al. teach the claimed invention above but do not specifically teach the use of hollow fibers having a cross-sectional area corresponding to 2 – 15% of the total cross-sectional area of the composite fiber.

Tanaka et al. is directed to hollow fibers suitable for use in various textile products including knitted fabrics (Abstract and column 3, lines 59 – 69 and column 4, lines 1 – 10). Tanaka et al. teach that the hollow fibers are made from islands-in-the-sea fibers, wherein the island components are processed and removed to create the hollow portions into the cross-sectional area (column 2, lines 1 – 69). Tanaka et al. notes that the hollow fibers of the invention have excellent lightness, ability to stay dry and

demonstrate good bulk (column 2, lines 1 – 5). Tanaka et al. teach that the hollow portions preferably constitute 2 – 65% of the fiber cross-section and in particular, 3%, 4%, 7%, 10%, 12 and 14% all being suitable values (column 5, lines 55 – 69).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to create the fiber of Miyake et al. with a hollow portion constituting 2 – 15% of the cross-sectional area as suggested by Tanaka et al. motivated by the desire to create a fiber having excellent lightness, ability to stay dry and demonstrate good bulk making suitable for textile applications, such as knitted fabrics.

As to claim 1, Miyake et al. in view of Tanaka et al. teach the claimed invention above but fail to teach that the staple fibers exhibit an average web area thermal shrinkage of 30 – 70% as determined according to the procedure described in claim 1. It is reasonable to presume that the average web thermal shrinkage of 30 – 70% is inherent to Miyake et al. in view of Tanaka et al. Support for said presumption is found in the use of like materials (i.e. hollow composite side-by-side fibers made of polytrimethylene terephthalate, wherein the two components have a specified intrinsic viscosity range and different between viscosities range and wherein the hollow part constitutes 2 – 15% of the cross-sectional area) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties would obviously have been present once the Miyake et al. in view of Tanaka et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977). Reliance upon inherency is not improper even though the rejection is based on Section 103 instead of 102. *In re*

*Skoner*, et al. (CCPA) 186 USPQ 80. It should be noted that the requirements of the fiber length and web used to in the test method are not considered to be required limitations of the claim but only a means to determine a parameter of the fiber of the claimed invention.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Chriss whose telephone number is 571-272-7783. The examiner can normally be reached on Monday - Friday 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571 - 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A Chriss/  
Examiner, Art Unit 1771  
September 14, 2007